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ABSTRACT

In large-scale assessments, some amount of background material is generally collected. Background questionnaires in the National Assessment of Educational Progress are the subject of this report. Most of the questions in NAEP background questionnaires have asked about course taking patterns and course content, but it is argued that the material gathered at present is of dubious quality and that information that is more extensive and valid could be collected. The questions about courses students have taken are often unnecessary or meaningless, and the coverage of courses is absent or incomplete. Information about advanced placement courses is demonstrably invalid, and information about other courses is often vague. Specific solutions, aimed at greater accuracy and detail, are proposed for these problems. A second major problem area is in the language that is used on the background questionnaires for fourth grade, which may be too difficult for the average student. Field testing these proposed changes is discussed. An attachment shows the percentage of 12th graders who report that they have taken advanced placement courses. (SLD)

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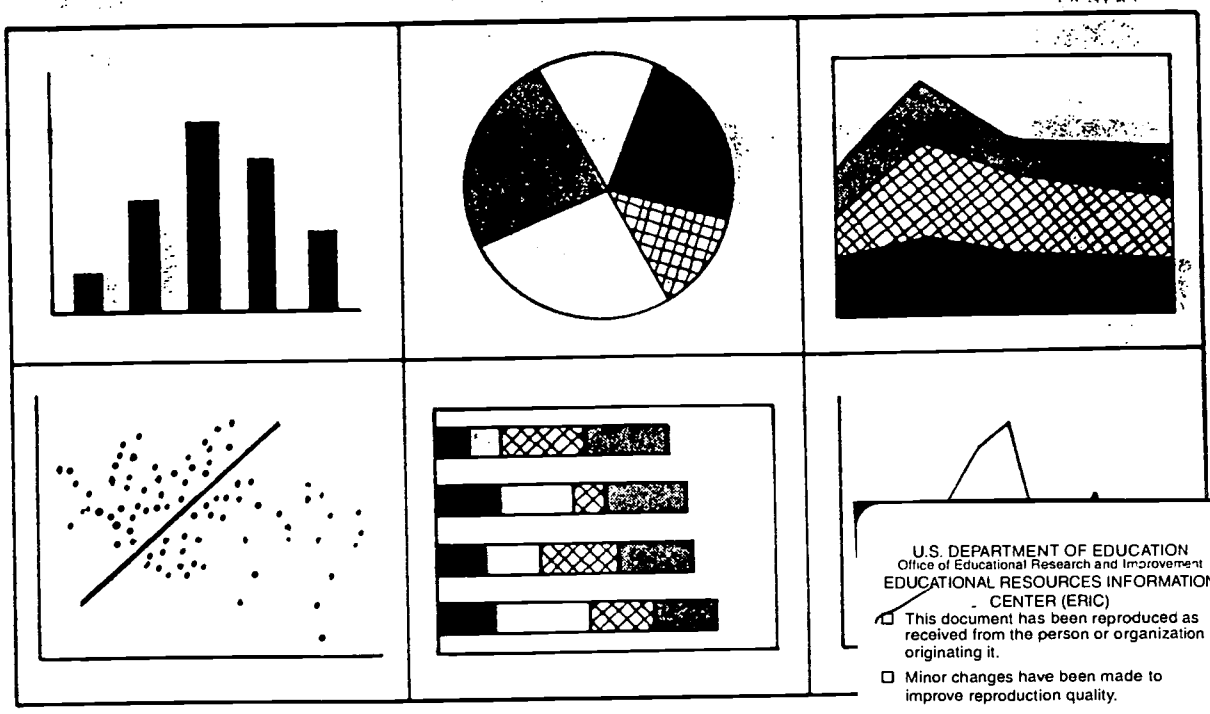
Working Paper Series

Innovative Solutions to
Intractable Large Scale Assessment

(Problem 2: Background Questionnaires)

Working Paper No. 97-32 October 1997



U.S. Department of Education
Office of Educational Research and Improvement

Innovative Solutions to Intractable Large Scale Assessment

(Problem 2: Background Questionnaires)

Working Paper No. 97-32 October 1997

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October 1997

Foreword

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Innovative Solutions to Intractable Large Scale Assessment

(Problem 2: Background Questionnaires)

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National Center for Education Statistics

October 1997

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INNOVATIVE SOLUTIONS TO INTRACTABLE LARGE SCALE ASSESSMENT
(Problem 2: Background Questionnaires)

While the primary purpose of NAEP is to "describe how well students are performing, but not to explain why" (NAGB Policy Statement on Redesigning NAEP, 1996, 4), some amount of background information has always been collected. A portion of the background material has been subject specific. It is these "subject questionnaires" that are my concern in this report. In these questionnaires, most of the questions have asked about course-taking patterns and course content. It is my contention that the information that is presently gathered (especially about which courses students have taken) is of dubious quality and that information that is both more extensive and valid could be collected.

I organize the report around two problems. The first is the quality and specificity of information about courses students have taken. The second is the level of language and understanding expected of 4th graders. In each case, I first indicate what the problem is and then suggest one or more solutions. In the final section, I discuss ways in which the proposed new methods might be field-tested.

Problem 1: Quality/Specificity of Information about Courses Students Have Taken

In this section my main concern is the subject questionnaires used at the 12th grade, especially for gathering information about social studies course work (though I have some comments on the writing and reading questionnaires). By 12th grade, students within a single school may have taken a number of different social studies offerings (world history, U.S. history, geography, American government, comparative government, participation in government, economics, psychology, etc.) at two or three different levels, and, across schools, the courses are known by an extraordinarily diverse set of names. Nonetheless, students have simply been asked whether they had "a geography course" or a "United States history course," and whether they have "studied American government or civics." It is both appropriate and feasible to collect much more refined information.[1]

I divide this overall problem into five parts. Parts 1-4 are grouped together and placed first because they call for only minor changes to the existing questionnaires. Part 5 would require a significant change in the way information is gathered; however, the solution suggested in Part 5 also holds the greatest potential for improvement in extensiveness and quality of information about course-taking patterns in all subject areas.

[1] I have not examined questionnaires in mathematics and science, but a similar critique almost surely applies.

(1) STUDENTS ARE ASKED UNNECESSARY OR MEANINGLESS QUESTIONS.

A common practice in survey instruments is to use skip patterns and skip instructions so that respondents are not asked "inappropriate" questions. A simple example is a question on length of marriage; it is typically not asked of those who are currently unmarried. Indeed, asking questions that "do not apply" is potentially confusing, invites unreliable and invalid responses, and, in the usual situation, wastes valuable respondent time.

This practice is not followed in the NAEP questionnaires. The problem arises for students who have not had any history/civics/geography/etc. courses and yet are asked about course content and procedures. In some instances, this may not be a problem. We can safely assume, for example, that almost all high school seniors have had a course on U.S. history, but only three-quarters have had a course in American government and politics, and only one-quarter a course in geography.[2]

Examples:

1994 Reading, grades 8 and 12: Q. 19 asks students whether they have access to a school or public library. Even if they say "no," they are expected to answer Q's 20-24 about using the school or public library.

1994 Geography, grade 12: Q's 5-6 ask students whether they have taken a course in world or in U.S. geography although some will have indicated in Q's 1-4 that they have had no geography course in grades 9-12. Q's 5-6 could apply to courses at any level of school (e.g., 8th grade), but that is not made clear and the context established by the first four questions is the high school.

1994 Geography, grade 12: Q's 8-14 inquire about topics such as geography homework and are asked of *all* students. Of course, students *could* have studied geography in other classes, but there is no indication in the questionnaire about how students should answer these questions if they have had no geography course or no formal study of geography at all.

1998 Civics (pre-test, grade 12): Q's 5-13 ask students whether they have studied various topics related to government even if they have just indicated that they have not studied civics or government in grades 9-12. Q's 14-25 ask all students about how they study civics/ government, even if they have just indicated that they have not studied any of the

[2]The figures for 1994 were: history (1.00 Carnegie credits)--95%; American government and politics (.50 credits)--78%; geography (.50 credits)--25%. Stanley Legum, et al., *The 1994 High School Transcript Study Tabulations: Comparative Data on Credits Earned and Demographics for 1994, 1990, 1987, and 1982 High School Graduates* (Washington, D.C.: National Center for Education Statistics, 1997), A-199.

listed topics. Q. 26 asks all students about their most recent civics/government class. And Q. 28 asks all students whether they have a textbook on civics/government.

In the civics example, one might argue that there is a more fundamental problem. That is, students may misinterpret what the study of civics/government is about and indicate that they have not studied it when, in fact, almost all students have studied government--e.g., in a history class. We have more to say about this in Part 5. But for the moment, even the fact that most students have studied government *someplace* does not make Q. 26 appropriate for all students, since it inquires about their most recent civics/government class.

(2) COVERAGE OF COURSES IS ABSENT OR INCOMPLETE.

On the pre-test for the 1998 Civics Assessment, students are not asked about civics *courses* at all. They are asked "In what grades(s) have you studied civics or government [9-12]? For more discussion of this point, see Part 5.

On the 1994 History Assessment, students were asked whether they had taken a United States history course in 9th-11th grades (Q's 1-3). They were then asked, "Are you taking a United States history course now?" Note that if there existed a one-semester course that a student took during the fall of the senior year, there would be no place to indicate having taken that course. While the "basic" U.S. history course is almost always a year long, more specialized, one-semester courses (designed precisely for the senior year) exist in some schools throughout the country.[3]

On the 1994 Geography Assessment, students were asked "did you take *or do you expect to take* a geography course in the following grades [9-12]?" (italics added) For students given the Assessment in February and March, the italicized portion is irrelevant; if the same is true in January, these italicized words could be deleted. Note also that there could be some, perhaps slight, confusion on the part of students currently enrolled in a geography course. These students did not (already) take the course but neither do they *expect to* take it.

In the pre-test for the 1998 Civics Assessment, students are asked only whether they "have studied" the U.S. Constitution, Congress, etc.--i.e., the responses are only "yes" and "no." Unlike in other subject questionnaires, students are not asked to indicate relative amounts of study.

[3]In one of the schools from which I gathered course information, there is a one-semester course called "Critical Issues/World at War, which would seem to be precisely this kind of course.

(3) THERE ARE UN-NOTED/UNEXPLAINED SHIFTS IN WHICH COURSES ARE TO BE CONSIDERED.

In the 1994 History Assessment, Q's 1-9 are exclusively about U.S. history. Then, without explanation or warning, Q's 10-24 ask about "history or social studies." There are three concerns: a) Would most analysts using the U.S. History NAEP really want student responses about history *and* social studies? b) Would such analysts want student responses about the study of *any* history? c) Do students pick up on this shift and respond to the question as asked?

From an analytical point of view, I see (a) and (b) as significant problems. Given that this is a *U.S. History* Assessment, I would presumably be most interested in information about *U.S. history* courses. But that is not what the question gives me. Point (c) is a problem even if I am satisfied with information about history and social studies because I am not sure how students are actually answering the question.

In the 1994 Geography Assessment, almost all of the questions are exclusively about geography. Q. 7, however, inquires about "geography or social studies."

(4) INFORMATION ABOUT AP COURSES IS DEMONSTRABLY INVALID.

While working with the 1988 Civics Assessment, I found that students with self-reported grades of D were as likely to say that they took an AP course as students with mostly A's; students in general and vocational/technical tracks reported taking an AP course as often as those in academic tracks (see Attachment 1). Obviously there is some confusion about what is meant by AP courses.

The same question about AP courses was used in the 1994 History, Geography, and Reading Assessments. At my suggestion, a new version of the question is being tested (see Solutions below).

(5) INFORMATION ABOUT COURSES TAKEN IS VAGUE AND (PROBABLY) MUCH LESS ACCURATE THAN NECESSARY, ESPECIALLY IN THE AREA OF CIVICS.

If the intent of the subject questionnaires is to find out about course work, Parts 1-4 indicate considerable vagueness and room for error/misinterpretation on the part of students. But there are additional points as well. For example, even when students are asked about particular courses (e.g., U.S. history, 9th grade), it is impossible to judge the level of course work or to make an independent judgment about the probable focus of courses taken.

The problem of ambiguity is heightened in civics. The difficulty is that civics/government material may be taught in separate courses or integrated into other courses, especially history.

This makes it inappropriate to ask the course question as it is done in history and geography: "Did you take a civics or American government course in grades 9-12." On the other hand, the question that is used--"have you studied civics or government"--leaves it up to the student to decide what material falls under that rubric.[4] This ambiguity about what constitutes the study of civics/ government must, in turn, affect in unknown ways the responses of students to questions about classroom activities.

As a result of allowing students to judge what is and is not a civics/government course, one has no indication of whether or not a student has taken a course wholly devoted to the subject. A student can indicate that he or she *studied* civics or government, but there is nothing to indicate the course(s) in which that study occurred.

Solutions:

(1) MAKE CLEAR, CONSCIOUS DECISIONS ABOUT WHO SHOULD BE ASKED WHICH QUESTIONS; ALERT STUDENTS TO THE BASIS FOR ANSWERING QUESTIONS (IF NOT OBVIOUS); INTRODUCE SKIP PATTERNS OR "STOP" INSTRUCTIONS TO EXISTING QUESTIONNAIRES.

First, some person or group--presumably the committee charged with overseeing the preparation of the assessment in that subject--must decide which questions should be asked of all students and which should be asked only of students who have had relevant course work. This will not always be a simple matter.

Example:

> 1994 Geography, grade 12: Here one would have to decide whether to ask Q's 8-28 of all students. My own opinion:
>
> Q. 16 (how much you like studying geography) can sensibly be asked of all students (and should be).
>
> Q. 9 (how much geography homework you have) is inappropriate for students without courses.
>
> Q's 8, 10-15, 17-28. These represent a more difficult decision. One might argue that everyone should be asked these questions because all students study at least a minimal amount of geography in some social studies class. I find that assertion somewhat dubious,

[4]For example, a student might wonder whether "Global Studies," taught in many New York State schools, involves the study of civics/government. (According to one school catalogue, "the concept of interdependence and the accelerated frequency of interactions among nations and people is a primary focus of this course.")

but the point is that this decision should be made very consciously and by people knowledgeable about the subject matter.

Second, if the basis for answering the questions is not obvious, instructions on the questionnaire should alert students to the basis for answering the questions.

Example:

1994 Geography, grade 12: A statement before Q. 8 might read:

ALL STUDENTS SHOULD ANSWER Q'S 8, 10-15. IF YOU HAVE NOT HAD ANY GEOGRAPHY COURSE IN GRADES 9-12, ANSWER ON THE BASIS OF GEOGRAPHY LESSONS THAT OCCUR IN OTHER COURSES SUCH AS HISTORY AND GOVERNMENT.

Note: I find this instruction somewhat awkward, which is partly the point. If it is not easy for students to understand how they are supposed to answer the questions, perhaps they should not be asked.

Third, the layout of the questionnaire must be modified so that skip instructions are as simple as possible. Among other things, this might result in rearrangements of the questions. In the geography example, Q. 16 and Q. 29 (about AP History) might be grouped together if they, but not others, were to be asked of all students.

A simple example of how skip instructions might look follows:

Questions 1-3. Did you take a geography course in the following grades? Fill in **one** oval for each question.

	Yes	No	I Don't Know
1. 9th grade	O	O	O
2. 10th grade	O	O	O
3. 11th grade	O	O	O
4. 12th grade (first semester)	O	O	O

5. Are you taking a geography course now?

O Yes

O No

If you have taken or are now taking a geography course, continue on with Question 6.

If you have never taken a geography course and are not taking one now, SKIP to Question 16.

6. Question 6 goes here.

(2) WHEN INQUIRING ABOUT COURSES, BE SURE THAT COVERAGE IS COMPLETE; POSSIBLY ELIMINATE THE PHRASE "DO YOU EXPECT TO TAKE" A COURSE.

Information about civics *courses* (as opposed to the content of civics lessons) cannot easily be gathered using the current questionnaire, even with reasonable modifications. For a suggested solution to this problem, see Part 5.

Complete course coverage requires special care in constructing the questions, paying special attention to the senior year. The greatest practical difficulty may be that some schools start new courses after the January assessment is given. If so, the phrase "do you expect to take" a course must be maintained. The suggested solution in Part 5 might circumvent this problem.

(3) DECIDE WHICH COURSE(S) TO ASK ABOUT; IF THERE IS A CHANGE AT SOME POINT IN THE QUESTIONNAIRE, ALERT STUDENTS TO THE CHANGE.

Someone--presumably the committee charged with overseeing the preparation of the assessment in that subject--must decide exactly which course(s) should be the subject of inquiry. My own feeling is that it makes most sense to stick to one subject--not, for example, to include social studies in one and only one question, as in the 1994 Geography Assessment.

If the basis for answering the questions changes, instructions on the questionnaire should alert students to that change.

(4) REFER TO AP COURSES BY THEIR FULL AND CORRECT TITLE.

Previously the question was:

> "Have you taken or are you currently taking an Advanced Placement course in [subject]?"

In the pre-test for the 1998 Civics Assessment, the question was changed to:

> "Have you taken or are you currently taking the College Board Advanced Placement course in United States Government and Politics ?"

Reference to the College Board and to the course by its full title may eliminate gross misunderstanding and misreporting by students. I assume that tests will be made to try to validate the responses to the new wording.

(5) USE A METHOD OF GATHERING COURSE-TAKING INFORMATION FROM STUDENTS THAT REFERS TO SPECIFIC COURSES OFFERED AT THE SCHOOL IN WHICH THE STUDENT IS BEING TESTED.

Section (a)

Fundamentally, asking students about high school courses they have had is difficult because of the great array of such courses when viewed from a national perspective. In the social studies area alone, the 1994 Transcript Study lists over 300 distinct course titles. Even in the highly structured field of mathematics there are well over 100.

In a given school, however, the number of courses in any given subject is relatively small. Thus, it may be possible to ask students about the courses they have had using the exact course titles in their school. The advantages of this approach are many:

Much more specific data about course-taking can be gathered.

More detailed data--e.g., about course lengths--could easily be coded.

It is easier to ask about courses in multiple subjects (e.g., both history and civics).

It is easier to ask about courses yet to be taken/currently being taken.

Data about courses taken are likely to be more reliability and more valid.

Data about course content and methods are likely to be more reliable/valid.

It is possible to gather information about civics/government courses as opposed to information solely about the teaching of civics material.

There are some potential problems/disadvantages as well. However, let me first explain how such a procedure might work.

One would begin by gathering lists of available courses (in the relevant subjects) from the high schools in the NAEP sample. The first page of the subject questionnaire would then be made school-specific. Consider the following example. I gathered course information on all subjects from several school districts in upstate New York. The following are lists of courses in social studies:

(Small Suburban) High School
Social Studies (Basic and regular) 9
Social Studies (Basic and regular) 10
Social Studies (Basic and regular) 11
AP American History
Law and Government
AP Government and Politics

(Large Suburban) High School District
American History
U.S. History and Government
Participation in Government Internship
Participation in Government
Contemporary Issues
AP American History
AP U.S. Government & Politics

(Small Town/consolidated) High School
Global Studies I
Global Studies II
United States History and Government
Economics/Participation in Government
Critical Issues/World at War
Criminal Justice
Advanced Placement History/American Voices

(Urban) High School District
Global Studies I (regular and honors)
Global Studies 10
Global Studies II (regular/honors/regents)
U.S. History/Gov't (regular./honors/regents)
Participation in Government
Economics
AP American History
AP European History

Below I have designed two possible formats for asking students about the courses they have taken. For illustrative purposes, I use the courses in the large suburban high school.

Format 1:

Questions 1a-1g. Have you taken or are you taking any of the following courses taught at NAME High School? Fill in **one** oval for each question. (If you transferred from another school, fill in circles for the courses that are closest to those named.)

	I Already Took It	I Am Taking It Now	Never took it, Not taking it
1a. American History	O	O	O
1b. U.S. History and Government	O	O	O
1c. Participation in Government Internship	O	O	O
1d. Participation in Government	O	O	O
1e. Contemporary Issues	O	O	O
1f. A.P. American History	O	O	O
1g. A.P. U.S. Government & Politics	O	O	O

Format 2:

Questions 1a-1g. Have you taken or are you taking any of the following courses taught at NAME High School? Fill in **one** oval for each question. (If you transferred from another school, fill in circles for the courses that are closest to those named.)

	Ninth Grade	Tenth Grade	Eleventh Grade	Twelfth Grade	Never took it, Not taking it
1a. American History	O	O	O	O	O
1b. U.S. History and Government	O	O	O	O	O
1c. Participation in Government Internship	O	O	O	O	O
1d. Participation in Government	O	O	O	O	O
1e. Contemporary Issues	O	O	O	O	O
1f. A.P. American History	O	O	O	O	O
1g. A.P. U.S. Government & Politics	O	O	O	O	O

In either case, the questions take up much less than one page, allowing considerable room for instructions and for larger lists of courses.[5]

What are the difficulties and possible disadvantages of such a method? The most obvious difficulties, with commentary, are:

How will transfer students respond?

Transfer students would probably have to answer as best they could in terms of the course listing at their present school. The information would be less accurate, but it is better to have inaccurate data for a small group of identifiable students than for all students.

Is a great deal more coding involved?

Somewhat more coding would certainly be involved. Because the course page would not be uniform for all respondents, it might have to be coded in a separate process. In addition, to make maximum use of the course-taking information, a small amount of information from the schools would have to be coded as well (i.e., at least whether the course was one semester or two). On the positive side, a taxonomy of courses already exists (see the Transcript Study), and this would presumably be the basis for course coding. Also, one would not have to make separate coding decisions for every student--only for each school.

Would this format take longer to fill out than the current format?

This is a matter for testing. There may be more questions because there could be as many as a dozen or so individual courses. However, it would probably be easier for students to check off which of their school's courses they have had than to try to decide how those courses fit into the categories used in the present questionnaires.

Will this format require a great deal more preparation work?

Somewhat. But the basic form would be the same throughout the country; only the specific course titles would vary. Gathering information on courses taught in a given school is straightforward (though one has to be careful to obtain information about courses over the past three years).

Would there be a danger of mixing-up/losing forms?

Certainly. But I believe that some form of identification is currently placed on the questionnaires; if so, it could be put on the separate course sheet as well,

[5]Ironically, there may be more mathematics courses within a given school than social studies courses. This occurs because of the multiple levels of certain mathematics courses.

allowing later matching should they be separated accidentally or for purposes of coding.

Would it be possible for an analyst to identify particular schools because of the particular combination of courses inquired about?

If exact titles were coded and made available to analysts, this might be possible. However, if courses are coded according to a nationwide taxonomy, and if the original, school-specific forms are not made available, this should not be a problem.

How would these questions be linked to questions about course content and methods?

Linkages would have to be worked out on a subject-specific basis. As with the current procedure, one would have to pay careful attention to which courses were the subject of inquiry. For example, one might wish to obtain course-taking information about all social studies courses but information about course content only for history courses. This could be done through careful skip instructions--e.g., "if you did not fill in a circle for Q's 1a and1f (you have not had a U.S. history course), skip to Q. 10.

Admittedly, the need to keep skip instructions simple could tax the skills of a good survey designer. It would also limit the number of types of courses one would wish to list; with a small number, skip instructions, if necessary, could be quite simple. In any event, I do not think this problem is insurmountable. Indeed, it might make distinctions between courses much clearer both for analysts and for students. Using the same illustrative courses as above (pp. 11-12), for example, one might re-order and label the courses as on the following page. This would make it possible to: a) ask both about enrollment in history and civics/government courses; and b) specify for students which courses they are to use as a basis for answering follow-up questions.

Format 2 (revised):

Questions 1a-1g. Have you taken or are you taking any of the following courses taught at NAME High School? Fill in **one** oval for each question. (If you transferred from another school, fill in circles for the courses that are closest to those named.)

	Ninth Grade	Tenth Grade	Eleventh Grade	Twelfth Grade	Never took it, Not taking it
History courses					
1a. American History	○	○	○	○	○
1b. A.P. American History	○	○	○	○	○
Civics/American government courses					
1c. U.S. History and Government	○	○	○	○	○
1d. Participation in Government Internship	○	○	○	○	○
1e. Participation in Government	○	○	○	○	○
1f. Contemporary Issues	○	○	○	○	○
1g. A.P. U.S. Government & Politics	○	○	○	○	○

IF YOU DID NOT HAVE ANY OF THE CIVICS/ GOVERNMENT COURSES, SKIP TO Q. XX.

---------- (next page)

2. In your civics/American government courses, did you do any of the following....?

Section (b)

An alternative method of gathering course-taking information is to eschew student reports and collect the information directly from transcripts. I would not propose even considering such a method except that a large-scale transcript study is already done for NCES and is done largely with the same schools and students as are in the NAEP sample. Therefore, it is worth asking whether the two studies can be combined.

For the most part, the advantages of such a procedure are obvious. In particular, one would have valid, detailed data about the courses taken by each student in a NAEP assessment, yet at the same time one could eliminate some of the questions on the subject questionnaires.

While these advantages make the procedure worth at least brief consideration by those knowledgeable about the NAEP and Transcript Study procedures, I currently believe that administrative and other complications would make it unworkable. For one thing, if the transcript study is done only once every 3-5 years, as in the past, there will be some NAEP studies not associated with a corresponding transcript analysis. Increasing the frequency of the transcript study would raise, not lower, costs. The NAEP studies not associated with a transcript analysis would have to rely on other methods, such as the current ones, and the variation in methods would prevent any cost savings and raise additional validity problems. In addition, the willingness of schools to participate would have to be considered. While most schools that participate in one now participate in the other, that is not uniformly the case. Also, the Transcript Study is evidently done after graduation. A delay in getting information about the students might slow reporting of NAEP results, whereas speeding up the transcript analysis might raise other problems. Finally, it would still be necessary to gather information about course content and methods from students directly. Such questions constitute the bulk of the subject questionnaires, so the savings in the time taken to administer NAEP would be inconsequential.

Problem 2: Level of Language/Understanding Expected of Fourth Graders

Some of the vocabulary used on the 4th grade questionnaires appears to be too hard for the average student. I am not an expert in this field, but all of the inquires and simple analyses that I have made support this contention.

The difficulty arises, first, in a specific item in the 1994 Geography Assessment and in the proposed 1998 Civics Assessment. The very first item asks 4th graders:

> "How often do you usually have social studies class in school?"
> (1994, Geography, Grade 4)
>
> "How often do you study social studies in school?"
> (1997 Field Test, Civics, Grade 4)

I do not believe most 4th graders know what we mean by "social studies." Moreover, even if at some level they understand the words, it is highly questionable whether we should rely on students' interpretations of what is or is not included under this rubric. A similar question was asked on the 1994 History Assessment, but there it referred to "social studies or history," so that 4th graders may have had at least some basis for answering.

More generally, consider a number of other words taken from various assessments:

> community, responsibilities, textbook, current events, filmstrips, panel discussions, role-playing, mock trial, dramas, opinion (1998 Civics pre-test)
>
> journals, regional concepts (1994 Geography)
>
> essays (1994 History)
>
> vocabulary, workbook (1994 Reading)
>
> contribute, collection, creativity, drafts, versions (1992 Writing)
>
> folder, portfolio (1994 Reading, Geography, History)

None of these words are in the Edgar Dale's "List of 3,000 Words Known by Students in Grade 4,"[6] although that should only be taken as a preliminary indication that further consideration is needed.

Even to the extent that individual words are understood, the phrasing does not seem conducive to understanding by all 4th graders. Surely 4th graders know whether the teacher cares "how much you've written," but they are asked how important "the length of your paper" is to your teacher (1992 Writing, Q. 14). Similarly, 4th graders certainly understand the concept of "correcting your writing," but they are asked about how often the teacher asks you to "write more than one draft of a paper" (1992 Writing, Q. 5). And while they would understand the concept if explained to them, one wonders what 4th graders think when asked whether they complete projects "that relate to the study of geography" (1994 Geography, Q. 6).

There is also the matter of the accuracy of the 4th graders' responses about classroom activities. So far, the matter seems to have been addressed only by noting that there are discrepancies between students' and teachers' responses, that the reason for these discrepancies is not clear, and that the reports represent their respective impressions of classroom activities (*1994 U.S. History Report Card*, p. 43). With older students, one might put some stock in students' impressions.

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[6]Jeanne S. Chall and Edgar Dale, *Readability Revisited: The New Dale-Chall Readability Formula* (Cambridge, MA: Brookline Books, 1995), pp. 16-29.

With young students, one wonders whether they have much validity at all. I personally do not know of any study of the accuracy of young children's responses (about any subject matter), but given the amount of error in adults' responses, even in reporting factual matters such as visits to the dentist or the holding of library cards,[7] I would anticipate very large amounts of error in 4th graders' answers.

Overall responses are only a partial guide in such matters, but consider these comparisons of teachers' and students' responses reported in the *1994 U.S. History Report Card* (pp. 48-49):

	% write short answers almost every day	% write reports almost every day/once or twice a week
Teachers	9	6
Students	35	24

One suspects that students' reports reveal not only "some discrepancies," but a very considerable overestimate of the extent of writing that takes place in the classroom. For some purposes, such discrepant impressions might still be useful; as an assessment of what actually happens in the classroom (as would be judged by an independent observer, for example), they seem questionable at best.

Solution: Simplify the Vocabulary and the Phrasing Used

The most obvious solution is just to simplify the vocabulary and the phrasing used. This would require input from people who are familiar with 4th grade students and who are asked to pay special attention to the matter of vocabulary and "understandability."

Although I say "just" simplify the vocabulary and phrasing, this is not a trivial task. That is why I say that the questions need to be looked at by experts asked to pay special attention to these matters. I am aware that each of the questionnaires was constructed by committees that included specialists in elementary education. But if my experience on various Civics Assessment committees is any guide, the focus of attention was on the content of questions, and relatively little was said about readability level.

[7]Overestimates of voter turnout and of voting for the winner have been well documented by political scientists (e.g., Brian D. Silver, et al. "Who Overreports Voting?" *American Political Science Review* (1986), 80:613-24). In the health area, see Ronald Anderson, et al., *Total Survey Error* (San Francisco: Jossey-Bass, 1979). More generally, see Seymour Sudman and Norman M. Bradburn, *Asking Questions: A Practical Guide to Questionnaire Design* (San Francisco: Jossey-Bass, 1986), pp. 56-63.

A more radical solution would be to eliminate altogether the 4th grade subject-matter questionnaire. Doing so would shorten the amount of time required of 4th graders, easing the time pressures that plague NAEP. It might result in higher school cooperation rates (which I understand are a particular problem for fourth-grade civics).

The tradeoff, of course, is that some information would be lost. My own assessment is that at least for the 4th grade, the loss would be minimal. I would be much more inclined to rely on information about classroom activities gathered from teachers than from students.[8] Even apart from the matter of question wording, I suspect that nine- and ten-year old children's assessments of time and frequency are problematic and that even in the best of circumstances it is difficult to obtain accurate estimates from them about how often they do various activities.[9] Of course, for some purposes, we are interested only in *relative* estimates, not in absolute amounts of time (i.e., we only wish to know whether one set of students spends more time on a given activity than some other set of students). This eases the validity problem, but I would still prefer teachers' reports to those of students.

The objection may be raised, of course, that teachers are likely to bias their responses in a (natural) effort to make themselves "look good." If so, one can treat these as "threatening questions" and use survey techniques suited to such questions. (See Sudman and Bradburn, *Asking Questions*, chap. 3).

There is one item that cannot be obtained from teachers that would be a potentially important loss. That is a question about a student's interest in the subject matter at hand (e.g., 1994 Geography, grade 4, Q. 11: "How much do you like studying geography?"). If this question, but not others, were deemed vitally important, it could possibly be attached to the end of the test instrument (as are questions about amount of effort on the Assessment).

Field-Testing of New Methods

Many of the changes I have suggested involve only small revisions of the subject questionnaires. While even modest changes should be pre-tested, they do not represent fundamentally new procedures that need elaborate testing.

However, the method suggested in Part 5 of listing school-specific courses is a more radical change and deserves more serious testing. Likewise, the problems associated with the level of language used in the fourth-grade questionnaires deserve careful testing of proposed revisions.

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[8]Personally, I would be inclined to go further and to rely on teacher information about 8th and possibly even 12th grade courses.

[9]Certainly adults have such difficulties (Sudman and Bradburn, *Asking Questions*, pp. 36-51).

To begin, I would point out that the question about Advanced Placement courses that has been field-tested for the 1998 Civics Assessment provides an initial test of a course-specific approach. If this question works out well, it will lend support to such a method.

Testing this approach more fully should not be difficult. Indeed, I suspect that the greatest difficulty--and one of the main benefits--lies in the need to think more carefully than heretofore about exactly what course information is wanted. In any event, tests are necessary both of feasibility and of the quality of the data collected. By feasibility, I am referring to the ability and willingness of students to respond to questions of the type suggested. My belief is that students will be better able to answer course-specific questions precisely because they know exactly what they are being asked. Nonetheless, it is possible that students will balk at trying to remember exactly what courses they had two and three years earlier. Providing course names should make the task easy, but there is no substitute for testing.[10]

To test results for quality, one might compare the responses to known information about a school's courses. For example, one can see how many students say that they took U.S. history in 10th grade when it is known that virtually all students take it in 9th grade. A better test would be to compare the responses to student transcripts. For a small study, this would not be overly time consuming or costly.

With respect to the level of language in the 4th grade questionnaires, the use of focus groups might be worthwhile. Focus group discussions would generate considerable insight into the way in which young students interpreted the questions and the kind of information and perspectives they used in answering them. Discussions with teachers--and perhaps with teachers and students together--would help provide information on the quality of students' answers to questions about course content and methods. Indeed, if successful, it might be useful to expand the use of focus groups to 8th graders and to high school students to gain insight into their responses and, ultimately, to help design better questionnaires.

[10]I have occasionally asked college students what courses they are taking *now* and received a blank stare while they slowly dredged up the information.

Attachment 1

Percentage of 12 Graders Reporting That They Have Taken an Advanced Placement Course by Self-Reported Grade and by High School Program (1988)

Grade/program	% AP course	N
Mostly A	18.5	790
Half A, half B	16.7	669
Mostly B, half B/half C	15.1	1441
Mostly C, half C/half D	12.1	697
Mostly D, mostly below D	17.9	151
Academic/college	16.3	2389
General	13.3	1476
Vocational/technical	13.6	389

Note: Unweighted N's, 12th graders only, 1988 NAEP (Civics).

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94-03 (July)	1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report	Dan Kasprzyk
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